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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Broadband Infrastructure Deployment and to Support Service Providers in the State of California	Rulemaking 20-09-001

REPLY COMMENTS OF CHARTER FIBERLINK CA-CCO, LLC (U-6878-C) AND TIME WARNER CABLE INFORMATION SERVICES (CALIFORNIA), LLC (U-6874-C) ON THE AUGUST 6, 2021 ASSIGNED COMMISSIONER'S RULING

James W. McTarnaghan
PERKINS COIE LLP
505 Howard Street, Suite 1000
San Francisco, CA 94105
Tel: (415) 344-7000
E-mail: jmctarnaghan@perkinscoie.com

Attorney for Charter Fiberlink CA-CCO, LLC and Time Warner Cable Information Services (California), LLC

September 21, 2021

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Charter Fiberlink CA-CCO, LLC (U-6878-C) and Time Warner Cable Information Services (California), LLC (U-6874-C),[1] submit these reply comments in response to opening comments on the Assigned Commissioner's Ruling, dated August 6, 2021 ("August 6 Ruling").

I. INTRODUCTION

Charter is dedicated to closing the digital divide and supports initiatives aimed at bringing high-speed broadband to unserved communities throughout California.[2] Toward that end, Charter supports the chorus of opening comments that advocate for targeting areas of the state that are unserved — based on current, publically-available data — and without access to any commercial supply of middle-mile fiber, i.e., taking a "worst-first" approach. This approach aligns closely with the requirement in SB 156 for Commission staff to recommend priority

[1] Herein, the term "Charter" refers to the non-jurisdictional affiliates of Charter Fiberlink CA-CCO, LLC and Time Warner Cable Information Services (California), LLC. Charter reiterates its objection to the OIR's naming of its certificated affiliates as respondents in these proceedings insofar as neither of the named certificated entities provides broadband services and so have no direct interest in, or relevance to, this proceeding. Further, Charter also reiterates its prior objections to the extent the OIR seeks to include Charter's cable affiliates as respondents.

[2] Charter has invested billions of dollars in its network and technologies in California over the last several years, including approximately $1.3 billion in California in 2020 alone. Since 2016, Charter has brought high-speed broadband to tens of thousands of homes in California that previously lacked access to high-speed broadband.

locations based on the following criteria: "areas with no known middle-mile network access" or "regions underserved by middle-mile networks" that will "enable last-mile connections to residences unserved by 25 mbps downstream and 3 mbps upstream."[3] Essentially, the law requires the Middle Mile Network to be deployed first in locations with (i) unserved households, and (ii) zero or limited existing middle-mile infrastructure of any kind. To that end, Charter reiterates its prior recommendation to prioritize and phase-in deployment of the state middle-mile network as follows:

- Stage 1: prioritize routes to unserved areas of majority-unserved counties;
- Stage 2: prioritize routes to unserved areas of majority-unserved census designated places ("CDPs"); and
- Stage 3: address all other unserved locations, without access to existing middle mile networks, and for which privately-funded network deployment is unlikely because low population density and/or challenging terrain would otherwise render last-mile projects uneconomic.

Conversely, as detailed in Section II below, certain commenters asked for additional middle-mile routes in highly-connected urban areas like Los Angeles ("LA") County, but current, publicly-available data shows that LA County has one of the highest rates of high-speed broadband availability in the state and thousands of miles of existing commercially-available middle-mile networks. The rare instances of unserved locations in the County are due to barriers to internet service provider ("ISP") access, such as issues with property owners' limiting access, not middle-mile limitations.[4]

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[3] Cal. Gov't. Code § 11549.54(c), (d).

[4] *See* Opening Comments of Charter Fiberlink CA-CCO, LLLC (U-6878-C) and Time Warner Cable Information Services (California), LLC (U-6874-C) on the August 6, 2021 Assigned Commissioner's Ruling at 12-16 and Attachment B, R.20-09-001 (Sept. 3, 2021) ("Charter Middle-Mile Opening Comments") (showing extensive middle-mile network deployment in LA County).

Further, as discussed below in Section III, the Commission should heed commenters' suggestions to consider the "proportionality" (*i.e.*, proportion of the population with broadband access) and "remoteness" of unserved areas — rather than issues unrelated to broadband access like broadband adoption rates and enhanced competition — when prioritizing areas for middle-mile development. Prioritizing areas with a high proportion of unserved households and areas that are geographically-remote will accelerate middle-mile deployment in a manner that is consistent with state law and the public interest.

Finally, the Commission Staff need not make recommendations regarding *all* locations of the proposed middle-mile network deployment right now, but rather should submit recommendations for *priority* locations now. This will give an opportunity to distribute money now and evaluate processes and outcomes before making further recommendations.

Below, Charter responds to comments filed by other participants and reiterates the rationale for recommendations made in its opening comments.

II. CALLS TO DIVERT RESOURCES FROM REMOTE, UNSERVED AREAS TO HIGHLY-CONNECTED URBAN HUBS SHOULD BE VIEWED WITH SKEPTICISM.

A. Some Comments Mistakenly Assert that a Lack of Open Access Middle-Mile in Highly-Connected Urban Areas Somehow Limits Last-Mile Connections.

The Los Angeles Economic Development Corporation ("LAEDC") alleges that open-access middle-mile network routes are needed in Los Angeles County because the lack of open-access middle-mile prevents ISPs from extending their services into certain areas of the County.[5] However, LAEDC offers no citations to support this assertion. Nor could it. Los Angeles County has one of the highest rates of high-speed broadband availability in the state: 99.4% of

[5] *See* Comments of LAEDC in Response to the Assigned Commissioner Ruling Seeking Comments on Middle Mile Deployment at 5-6, R.20-09-001 (Sept. 3, 2021) ("Comments of LAEDC").

households are served at 100 Mbps.[6] Additionally, publicly-available fiber maps reveal that areas such as Los Angeles County are flush with middle-mile networks.[7] This fiber is currently commercially-available to ISPs in highly-connected urban areas such as Los Angeles County, and no opening comments demonstrate any issues with access to or the cost of such fiber.[8] More middle-mile fiber in areas with abundant middle-mile network availability and access will not necessarily lead to last-mile connections to currently-unserved areas. Rather, the rare instances of unserved locations in these areas are generally due to barriers to *last-mile deployment*, including issues with property owners preventing access to deploy and other similar issues.[9] California must instead address these issues separately with targeted policy aimed at resolving last-mile obstacles.[10]

Other parties, including The Utility Reform Network ("TURN") and CVIN, LLC acknowledge that middle-mile facility limitations may not be constraining last-mile residential service offerings for all "unserved" households.[11] CVIN notes that last-mile, not middle-mile,

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6 *See* Opening Comments of Charter Fiberlink CA-CCO, LLC (U-6878-C) and Time Warner Cable Information Services (California), LLC (U-6874-C) on the Assigned Administrative Law Judge's May 28, 2021 Ruling at 13, R.20-09-001 (July 2, 2021) ("Charter Redlining Comments").

7 *See, e.g.* Charter Middle-Mile Opening Comments at 9.

8 The Commission Staff's recent data request seems to shifts the burden of demonstrating middle-mile availability to ISPs. *See* Email from Robert Osborn, Director, Commc'ns Div., Cal. Pub. Utils. Comm'n, Request for Geospatial Data Regarding Broadband Infrastructure Deployment Rulemaking (R.) 20-09-001 by October 6, 2021 (Sept. 15, 2021). However, the Commission's own data shows high rates of broadband service in LA County, which would not be feasible absent ample middle-mile networks.

9 *See* Charter Middle-Mile Opening Comments at 12-16 (describing last-mile barriers to reaching unserved households in dense urban areas).

10 *See id*.

11 *See, e.g.*, Opening Comments of The Utility Reform Network on the Assigned Commissioner's Ruling Seeking Comment for the Locations for a Statewide Open-Access Middle-Mile Broadband Network at 6, R.20-09-001 (Sept. 3, 2021) ("TURN Comments");Comments of CVIN LLC dba Vast Networks

challenges limit service availability: "[m]any areas may have fiber middle-mile, but the incumbent providers may not have the fiber infrastructure to reach homes." Further, the cost-per-customer to provide *middle-mile* connections in urban areas is less than the cost-per-customer to provide middle-mile connections in rural areas.[12] This drives greater middle-mile investment in urban, rather than rural, areas — as seen by the widespread availability of middle-mile network in Los Angeles County — and this underscores the need to prioritize middle-mile development in geographically-remote regions of the state that truly lack middle-mile access.[13]

B. Proposals to Add Duplicative Segments to Highly-Connected Urban Communities Should Not Be Pursued at this Point.

The Commission should not adopt recommendations to develop new routes to served areas that already have ubiquitous broadband availability and significant commercially-available middle-mile infrastructure, especially where those recommendations are based on flawed data.

For example, the County of Los Angeles makes recommendations for the proposed Middle Mile Network based on a series of unsubstantiated claims, including identifying neighborhoods for which they claim more than 20% of the neighborhood population is unserved.[14] The communities noted by the County are in fact served at rates often exceeding

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(U7216c) On Assigned Commissioner's Ruling August 6, 2021 at 7, R.20-09-001 (Sept. 3, 2021) ("Opening Comments of CVIN, LLC").

12 *See* Opening Comments of CVIN, LLC at 8 (addressing locational variation in middle mile infrastructure affordability by noting "in urban areas, there tends to be more customers per mile and greater competition that drives prices down. In rural areas, there are fewer customers per mile and greater distances. Thus, the cost to serve customers in rural areas can be higher."). *See also* Coleman Bazelon & Paroma Sanyal, *Understanding Broadband Deployment: A Case Study of Los Angeles County*, Brattle Group, 11 (July 2, 2021) ("Brattle Group Report"), Exhibit A to Opening Comments of Charter Fiberlink CA-CCO, LLC (U-6878-C) and Time Warner Cable Information Services (California), LLC (U-6874-C) on the Assigned Administrative Law Judge's May 28, 2021 Ruling, R.20-09-001 (July 2, 2021).

13 *See* Charter Middle-Mile Opening Comments, 9, 11, Attachment B (showing extensive middle-mile network deployment in LA, Orange, and Riverside Counties).

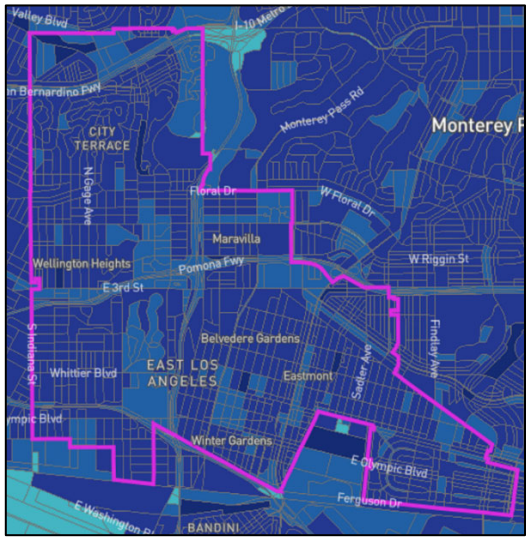
14 Comments of the County of Los Angeles at 6.

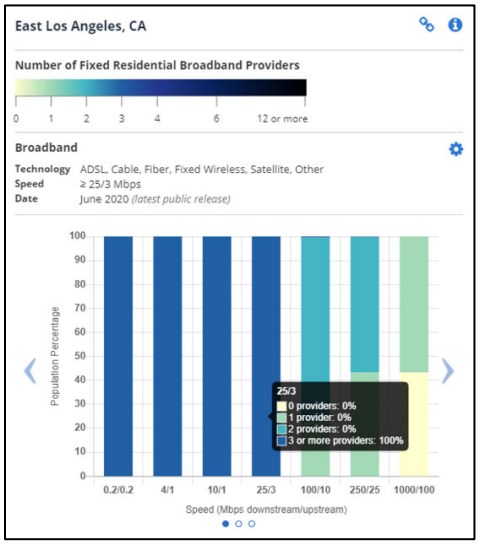
98%.[15] Additionally, thousands of miles of existing commercially-available middle-mile networks run through LA County.[16] Provided below are broadband availability maps of three neighborhoods — East Los Angeles, Compton, and Paramount — claimed by the County to be 20% or more unserved. The maps demonstrate that, in all three cases, over 99% of the population is served at 25/3 Mbps by three or more providers.

Figure 1 – FCC Data Reveals High Rates of High-Speed Broadband Availability in Los Angeles County Neighborhoods Identified by the County as Low-Income Neighborhoods

East Los Angeles

100% of the population has 25/3 Mbps service, offered by three or more providers.



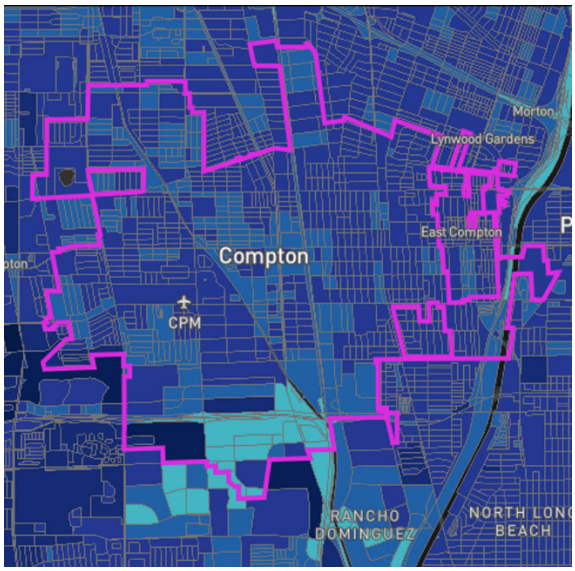


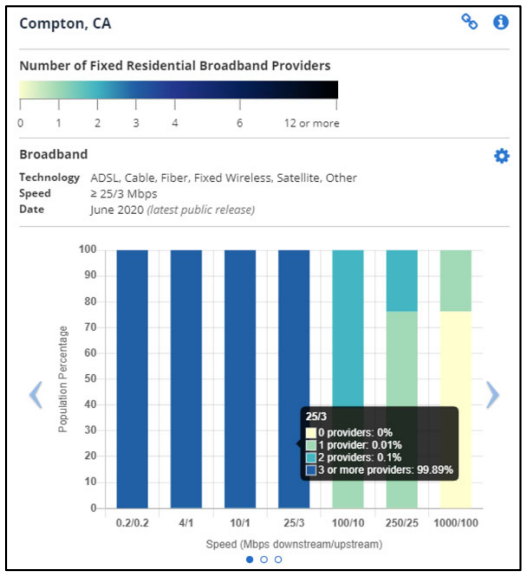
[15] FCC, *Fixed Broadband Deployment*, https://broadbandmap.fcc.gov (last visited Sept. 20, 2021).

[16] *See* Charter Middle-Mile Opening Comments, 9 and Attachment B (showing extensive middle-mile network deployment in Los Angeles, Orange, and Riverside Counties)

Compton

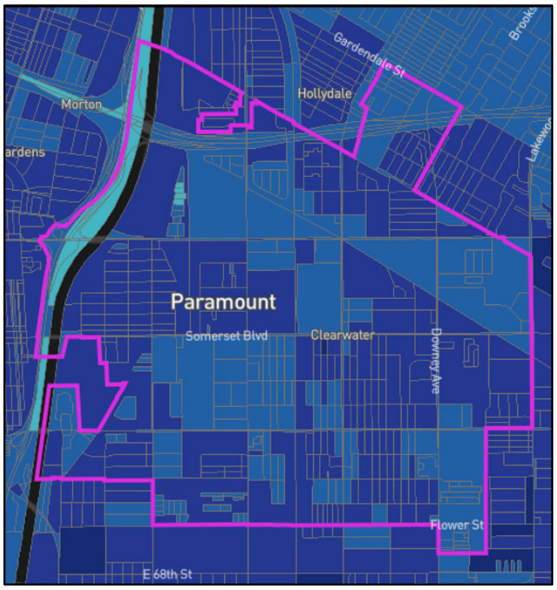
99.89% of the population has 25/3 Mbps service, offered by three or more providers.

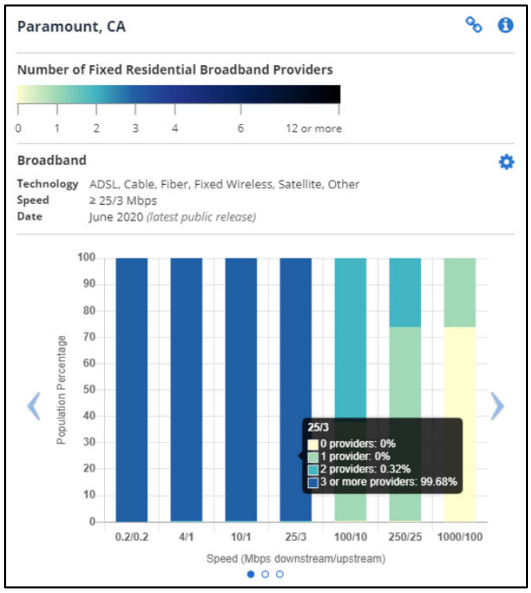




Paramount

99.68% of the population has 25/3 Mbps service, offered by three or more providers





Not only does the data reveal that these neighborhoods have high rates of broadband service availability, with multiple fixed residential broadband providers, but also, these

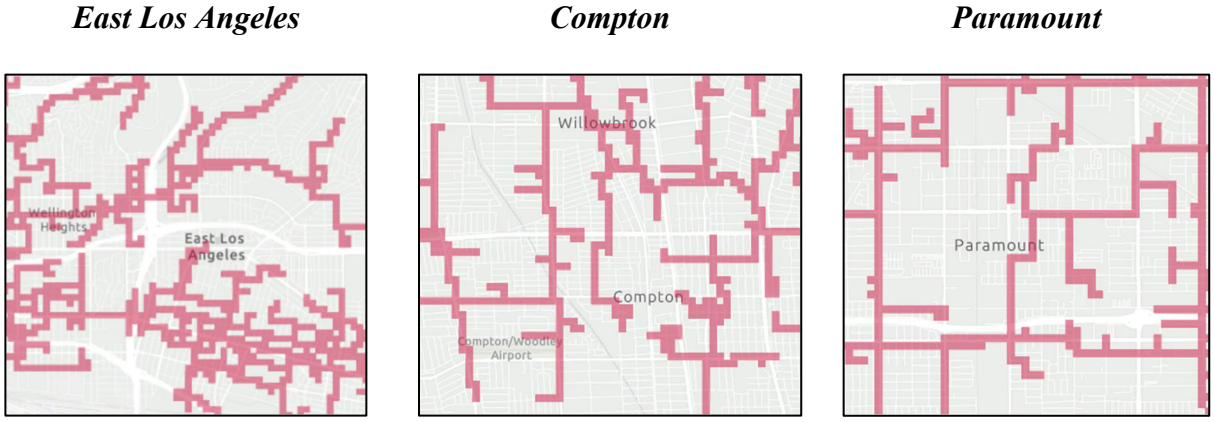
neighborhoods are located in areas with ample middle-mile network. Further, ISPs, like Charter, that do not typically use commercially-available middle-mile, can still blanket a neighborhood with broadband access without such middle-mile fiber.

Numerous parties agree that the state middle-mile network should not overbuild existing infrastructure.[17] However, the images below in Figure 2 demonstrate that middle-mile fiber routes through these LA neighborhoods would almost certainly duplicate existing commercially-available middle-mile fiber from Crown Castle,[18] only one of several middle-mile providers in the area.

[17] *See, e.g.*, Opening Comments of the San Diego Association of Governments ("SANDAG") on the Assigned Commissioner's Ruling Regarding Broadband Infrastructure Deployment at 7, R.20-09-001 (Sept. 3, 2021) (noting the CPUC should acquire network location information "to design a middle-mile network that is open but not duplicative of existing networks…."); Opening Comments of AT&T California (U 1001 C) on Assigned Commissioner's Ruling Dated August 6, 2021 Regarding Middle-Mile Broadband Network at 15, R.20-09-001 (Sept. 3, 2021) ("state funds should not be used to overbuild middle-mile networks operated by AT&T and other companies"); Opening Comments of Frontier California Inc. (U 1002 C) Citizens Telecommunications Company of California Inc. dba Frontier Communications of California (U 1024 C) Frontier Communications of The Southwest Inc. (U 1026 C) ("Frontier") on August 6, 2021 Assigned Commissioner's Ruling at2, R.20-09-001 (Sept. 3, 2021) ("[I]n identifying priority areas, the Commission should minimize the overbuild of existing infrastructure to the fullest extent possible."); Comments of USTelecom – The Broadband Association at 2, R.20-09-001 (Sept. 3, 2021) ("The Commission should make sure to avoid overbuilding existing routes that already meet the goals of SB 156"); Opening Comments of Small LECs on August 6, 2021 Assigned Administrative Law Judge's Ruling at 3, R.20-09-001 (Sept. 3, 2021) (recommending "that the State minimize the geographic areas where it overbuilds existing middle-mile infrastructure.").

[18] *See* Crown Castle, *Infrastructure Solutions: Solutions to Power Possibility*, https://www.crowncastle.com/infrastructure-solutions/ (last visited Sept. 20, 2021).

Figure 2 – Crown Castle Middle-Mile Fiber Extends into East Los Angeles, Compton, and Paramount

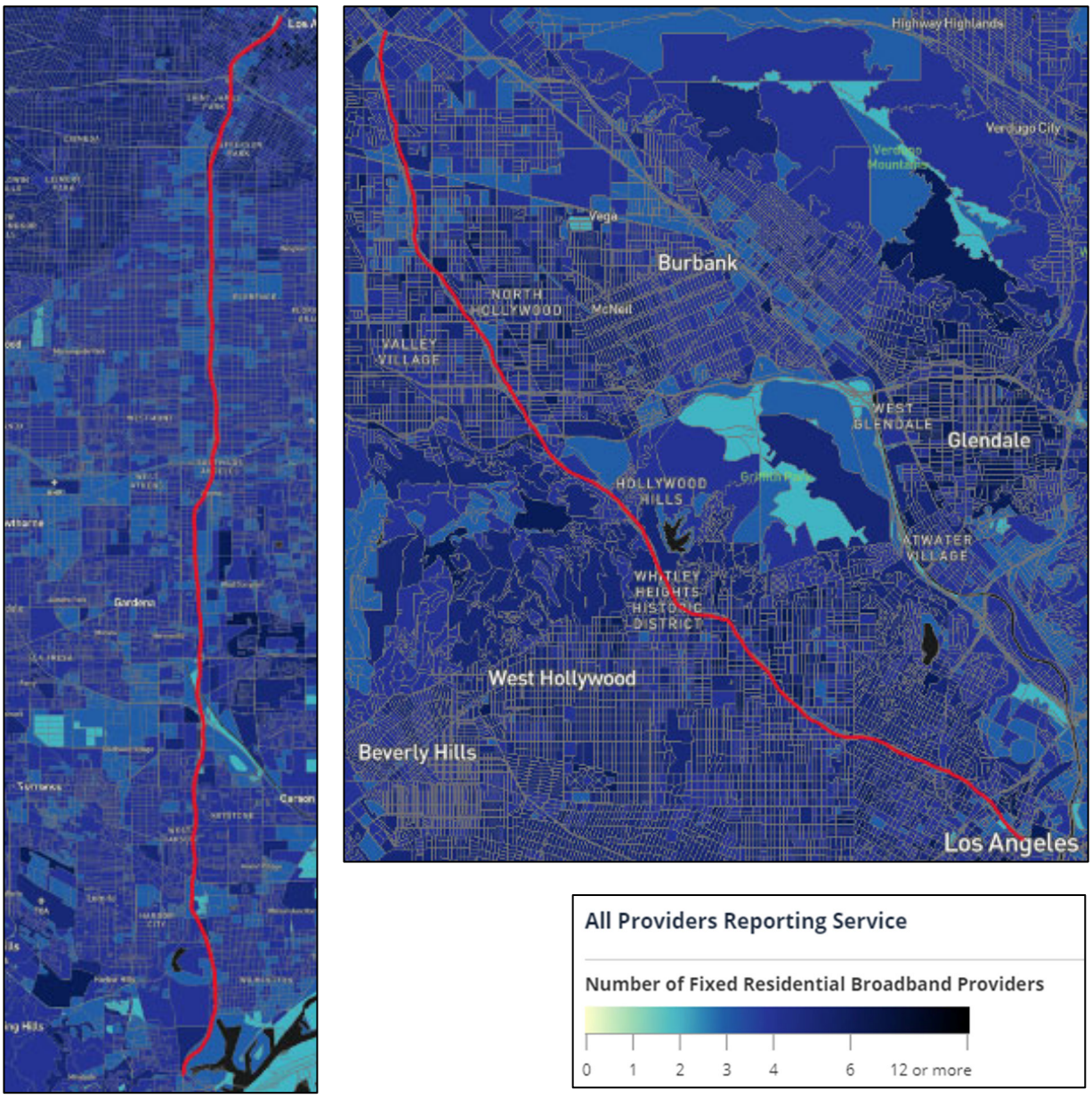


As another example of flawed recommendations, the LA Economic Development Corporation protests that proposed middle-mile routes exclude communities along "the 110 freeway from Downtown LA south to the Port of Los Angeles and along [the] 101 freeway from Downtown LA north to the San Fernando Valley and along its continuation as the 170 freeway north to the 5 freeway."[19] However, the data reveals that communities along the 110 freeway and the 101 freeway are largely served. Figure 3 illustrates ubiquitous high-speed broadband availability along the proposed freeways routes indicated in red. The maps reveal that neighborhoods along the freeways have at least two, and more often, three or more, fixed residential broadband providers.

[19] Comments of LAEDC at 9-10.

Figure 3 – FCC Data Shows High Broadband Availability Along the 101 and 110 Freeways

Interstate 110 *U.S. Highway 101*



III. NUMEROUS PARTIES PROPOSE THAT NETWORK DEPLOYMENT SHOULD BE PRIORITIZED BASED ON PROPORTIONALITY AND REMOTENESS.

In order to prioritize areas for middle-mile development and to avoid overbuilding, the Commission should recommend the approach several parties have proposed: the Commission should look to the "proportionality" or proportion of unserved households in a given geographic area.

The proportion of unserved households — which, in some remote areas such as Mad River, Trinity County and Ponderosa, Tulare County, as noted in Charter's opening comments, can be as high as 100% — indicates insufficient last-mile broadband availability, which could be attributed to a lack of middle-mile network availability. The proportion of unserved households provides a far more accurate indicator of middle-mile availability than the number of unserved households: a low proportion of unserved households in a densely-populated urban area (which could amount to a relatively high number of unserved households) is typically indicative of barriers to ISP access, including from issues with property access, not middle-mile constraints.[20]

In addition to the proportion of unserved households, the Commission should consider the "remoteness" of unserved areas in order to prioritize middle-mile development. Geographic accessibility is a key cost driver of middle-mile network costs, and geographically-remote areas are least likely to have middle-mile network access. Parties' comments call for Commission prioritization of remote, geographically-isolated, difficult-to-reach areas, which are typically most vulnerable to natural disasters.[21] Such prioritization is consistent with a "worst-first"

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[20] *See, e.g.,* Charter Middle-Mile Opening Comments at 12-16 (describing last-mile barriers to reaching unserved households in dense urban areas).

[21] *See, e.g.*, Opening Comments of Rural County Representatives of California on Middle Mile Infrastructure Pursuant to Senate Bill 156 at 3, R.20-09-001 (Sept. 3, 2021).

approach in which new middle-mile routes are first built in unserved areas with the least access to middle-mile fiber.

IV. PRIORITIZATION CRITERIA THAT ARE UNRELATED TO CONNECTING UNSERVED COMMUNITIES SHOULD BE DISMISSED OUTRIGHT.

A. Adoption Rates or "Unaffordable" Service Are Not Reliable Indicia of Areas to Prioritize for Middle-Mile Development.

While end-user broadband adoption patterns must be considered in efforts to close the digital divide, they are not challenges that will be resolved by building duplicative middle-mile fiber routes in areas that already have ubiquitous broadband availability. According to Pew Research, 80% of consumers without in-home broadband report that they are not interested in getting high-speed fixed broadband connections in their homes, with most respondents reporting that their "smartphone [does] everything they need."[22] Pew Research also reveals that 31% of non-broadband users do not subscribe to broadband because the cost of a computer is too high.[23] Additionally, the Emergency Broadband Benefit ("EBB") program — in which approximately 70% of customers have chosen mobile broadband over speedier fixed broadband service — further demonstrates that fixed broadband service is not universally desired by consumers.

While a variety of factors drive end-users' fixed broadband adoption decisions, there is *no demonstrated link between middle-mile network deployment and broadband adoption in areas where high-speed broadband is already available*. Further, there is no statutory basis for prioritizing middle-mile development on the basis of either broadband adoption rates or service affordability: SB 156, as codified, requires the prioritization of areas with no middle-mile access

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[22] Monica Anderson, *Mobile Technology and Home Broadband 2019*, Pew Research Center (June 13, 2019), https://www.pewresearch.org/internet/2019/06/13/mobile-technology-and-home-broadband-2019.

[23] *Id.*

or no service at all. Thus, the Commission should not rely on broadband adoption rates to inform its middle-mile route recommendations.

B. Competition Should Not Be Prioritized Over Connecting Unserved Households.

Certain commenters falsely portray the competitive landscape for high-speed broadband services in highly-connected urban areas, and then seek to have the state's network solve this imagined problem.[24] As an initial matter, no comments present data to show that additional middle-mile routes, especially in urban areas, would increase competition. Moreover, it would be poor policy to prioritize increased choice and competition in broadband service provision in areas that are already served when some areas of the state *lack access to any broadband service at all*.

Parties like UNITE-LA that allege a lack of competition in certain communities in LA County fail to address the contradiction between their assertions and actual data. Charter's service territory covers 98.3% of LA County's population, and there is more than one provider of high-speed wireline broadband service in 75% of that area,[25] including all of the communities identified by UNITE-LA.[26] Additionally, the legislative mandate of SB 156, as codified,

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[24] *See, e.g.*, California Community Foundation (CCF) Comments on Locations for a Statewide Open-Access Middle-Mile Broadband Network at 3-4, 10, R.20-09-001 (Sept. 2, 2021); Opening Comments of UNITE-LA, Inc. on the Assigned Commissioner Rulemaking for Middle Mile Broadband Infrastructure Deployment at 4, R.20-09-001 (Sept. 3, 2021); Comments of LAEDC at 5-6.

[25] *See* Charter Redlining Comments at 28 ("Over 75% of the population of Los Angeles County has 100 Mbps service available from at least two wireline providers. That is not to mention the presence of other, non-wireline ISPs").

[26] Opening Comments of UNITE-LA, Inc. on the Assigned Commissioner Rulemaking for Middle Mile Broadband Infrastructure Deployment at 4. Notably, even in the limited instances where Charter is the only provider of 100 Mbps service, customers still get the benefit of Charter's national pricing, which is equivalent to pricing in areas with many other ISP competitors.

contains no reference or implication that the state should consider competition in identifying areas in which to prioritize middle-mile network development.

V. COMMENTERS BROADLY AGREE THAT ROUTES MUST BE TIED TO DATA SHOWING THE LACK OF HIGH-SPEED BROADBAND IN A GIVEN COMMUNITY.

Multiple commenters point out that the Commission should collect more data about the availability of broadband service before recommending middle-mile routes.[27] The Commission should base its middle-mile route recommendations on broadband availability data because doing so is consistent with statutory requirements to prioritize routes that will connect unserved residences. Moreover, doing so is both sound policy and efficient resource allocation. Broadband availability data, such as that collected and disclosed by the FCC and CPUC can provide accurate information about broadband deployment.

Some commenting parties argue, but do not provide evidence, that broadband availability data is flawed.[28] However, an expert report from Ph.D. economists provided earlier in this proceeding show that FCC data, especially in urban areas, is highly accurate.[29]

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[27] *See, e.g.*, Opening Comments of CGLA at 4-5, 15, R.20-09-001 (Sept. 2, 2021); Opening Comments of The Utility Reform Network on the Assigned Commissioner's Ruling Seeking Comment for the Locations for a Statewide Open-Access Middle-Mile Broadband Network at 4; Open-Access Middle-Mile Initial Comments of Utility Consumers' Action Network (UCAN) at 4, R.20-09-001 (Sept. 3, 2021; Comments of the Office of the Mayor, City of Los Angeles, Regarding Assigned Commissioner's Ruling at 3, R.20-09-001 (Sept. 3, 2021).

[28] *See* Opening Comments of CGLA at 7, 11, 16-17.

[29] *See* Charter Redlining Comments, Exhibit A – Coleman Bazelon & Paroma Sanyal, Understanding Broadband Deployment: A Case Study of Los Angeles County, Brattle Group (July 2, 2021) ("A much-critiqued feature of the Form 477 data is that it treats an entire census block as covered at a certain speed, even if only a portion of the census block was covered by that speed. We note that this is primarily a problem in rural areas, where census blocks are very large. In urban areas, the much smaller size of census blocks reduces any overstatement of broadband availability.").

The Commission should adopt an approach akin to that suggested by the Public Advocates Office ("PAO"). The PAO suggests that the Commission use its most recent End of Year Broadband Deployment data and census block data to identify unserved areas for which middle-mile deployment should be prioritized.[30] This suggestion offers a practical approach to identify priority areas for immediate middle-mile deployment.

VI. CONCLUSION

The Commission Staff should recommend prioritizing middle-mile network development in areas without broadband availability access and any middle-mile fiber, as required by state law and the public interest. Such prioritization will minimize the risk of overbuilding existing middle-mile network routes and diverting resources for middle-mile development from unserved areas to highly-connected urban hubs. Proposals to add middle-mile fiber to highly-connected urban communities would simply add routes to areas with high rates of broadband service availability and commercially-available middle-mile fiber — without resolving the primary barriers to ISP last-mile deployment in those areas.

In order to prioritize areas for middle-mile development in a manner consistent with state law and the public interest, the Commission should consider "proportionality" and "remoteness" of unserved areas. The Commission's short-term and immediate recommendations should focus on development of middle-mile routes in areas that have a high proportion of unserved households and that are geographically remote. In order to identify additional areas that may benefit from middle-mile network development, the Commission should undertake review of current publicly-available data.

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[30] Opening Comments [of PAO] on Assigned Commissioner's Ruling on Locations for a Statewide Open Access Middle Mile Network at 3, R.20-09-001 (Sept. 3, 2021) (citing CPUC End of Year Broadband Deployment data for December 2019 available as of 8/19/2021).

Dated: September 21, 2021

Respectfully submitted,

/s/ James W. McTarnaghan

James W. McTarnaghan
PERKINS COIE LLP
505 Howard Street, Suite 1000
San Francisco, CA 94105
Tel: (415) 344-7000
E-mail: jmctarnaghan@perkinscoie.com

Attorney for Charter Fiberlink CA-CCO, LLC and Time Warner Cable Information Services (California), LLC

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